CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 89-121
NPDES PERMIT NO. CA0005240
WASTE DISCHARGE REQUIREMENTS FOR:

CALIFORNIA AND HAWAIIAN SUGAR COMPANY
CROCKETT, CONTRA COSTA COUNTY

AND

CROCKETT-VALONA SANITARY DISTRICT
CROCKETT, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, hereinafter Board, finds that:

1. California and Hawaiian Sugar Company (hereinafter C&H) and the Crockett-Valona Sanitary District (hereinafter the District) jointly filed an application for NPDES permit reissuance dated August 30, 1988. This NPDES permit application covers wastewaters generated by the C&H cane sugar refinery, the District's sewerage system and the plant that treats and disposes of the combined waste.

2. C&H and the District (hereinafter the Dischargers) entered into a Joint-use Agreement for the Dischargers' treatment plant on November 9, 1976.

3. The District is responsible for collection and handling sewage within its sewer system. Sewage is comminuted and degritted before the District pumps it to the Dischargers' treatment plant. All the grit thus removed is hauled to a permitted Class II disposal site.

4. C&H is responsible for waste discharged at its sugar refinery and for operation of the Dischargers' treatment plant and outfall, as well as the additional discharge points from the sugar refinery.

5. Sludge from the wastewater treatment plant and other solid waste from the C&H sugar refinery is disposed of at a landfill on C&H property. C&H has filed a Report of Waste Discharge on this landfill in January of 1989. As of the date of this Order, no Waste Discharge Requirements have been issued for this landfill.

6. C&H discharges industrial and sanitary wastes containing pollutants into Carquinez and an unnamed tidal stream tributary thereto, both waters of the United States, as follows:

   a. Waste 001 consists of 27.4 million gallons per day (mgd) of once through cooling water used in barometric condensors on vacuum pans, condensed vapors from vacuum pans, cooling water for evaporators and steam turbine heat exchangers. It also includes brine and rinse water from zeolite units and boiler blowdown water and roof drain water and is discharged through a diffuser at

the bottom of Carquinez Strait which extends to approximately 200 feet offshore at a depth of 47 feet.

b. Waste 002 consists of 1.2 mgd of effluent from the biological treatment of process waste from the C&H sugar refinery and domestic waste from the District. Wastes from the sugar refinery include waste sugar solutions, bone charcoal washings, waste filter aid slurries, refinery equipment washdowns, rail car washings, boiler water treatment waters (silica removal), clarifier insolubles and scums. The treated effluent is discharged through a 47 foot deep submerged outfall and diffuser to Carquinez Strait, 637 feet from shore directly below the Carquinez Bridge.

c. Waste 003 consists of 0.02 mgd of boiler house waste including seal and cooling waters from pump glands, fan bearings, air compressor and brine and rinse waters from zeolite softeners. Some of Waste 001 may be diverted through a valved connection to Waste 003 for pH adjustment provided compliance with the temperature requirement is maintained.

d. Waste 004 consists of about 100 gallons per day of water from the refinery rail car scale pit which accumulates from rinsing the exterior top hatches of rail cars carrying bulk granulated sugar. This waste also includes some stormwater run-off from the refinery yard. Waste 004 will be permanently diverted to the wastewater treatment plant by January 1, 1990.

e. Waste 005 consists of about 100 gallons per day of wastewater effluent from an oil and grease separator at a steam cleaning wash rack. This waste also includes some storm water from the refinery yard and community.

g. Waste 007 consists of about 100 gallons per day of wastewater from the truckloading station and includes water from hydraulic operators, loading spout washing, scale pit drainage and some run-off. Waste 007 is currently inactive, but may be used in the future.

h. Waste 008 consists of stormwaters from the refinery yard and small quantities from a steam cleaning rack and fire hose washing.

i. Waste 009 consists of effluent from the oil separator on the drains from the raw sugar dock. These drains discharge primarily stormwater.

Within twenty four (24) months of the issuance date of this Order, pursuant to Provision 4. of this Order, all wastewater flows from outfalls 004 through 009 will be diverted to the Crockett-Valona Sanitary District sewer lines or C&H wastewater treatment plant lines whenever washing or steam cleaning operations are being carried out, during the first rainstorm of each winter season and at any other time that these streams may contain constituents of concern. Some or all of some of these flows will be permanently diverted to the wastewater treatment plant. Detailed plans for the diversions of these waste

streams to treatment will be submitted for approval by the Executive Officer of the Regional Board within six months of the date of adoption of this Order.

7. C&H is exempt from the requirements 5.A(1)a and 5.A(2) of the State Thermal Plan (Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California) based upon State Water Resources Control Board Resolution 75-72 issued July 17, 1975 and the U.S. Environmental Protection Agency's concurrence by letter of September 2, 1975.

8. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 16, 1986.

9. The beneficial uses of Carquinez Strait and contiguous waters are:

   a. Recreation (contact and non-contact).
   b. Fish migration and spawning
   c. Habitat for wildlife and estuarine organisms including some rare and endangered species.
   d. Industrial service and process water supply.
   e. Esthetic enjoyment.
   f. Navigation.
   g. Commercial and sport fishing.

10. Effluent limitations established in 40 CFR 409.20, Subpart B, Crystalline Cane Sugar Refining Subcategory are applicable to the discharge. The discharger's Biological Oxygen Demand and Total Suspended Solids Effluent Limits are set according to this Federal guideline proportional to the 4300 tons per day of raw sugar melt which is processed, as reported in the application for NPDES permit renewal.

11. Effluent limitations and toxic effluent standards established pursuant to Section 301, 304, and 307 of the Clean Water Act and amendments thereto are applicable to the discharge.

12. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21000 of Division 13 of the Public Resources Code in accordance with Water Code Section 13389.

13. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written views and recommendations.

14. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED THAT the discharger in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Federal Water Pollution Control Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Effluent Limitations

1. Effluent discharge shall not exceed the following total mass emission rates:

a. Total mass emission rate of BOD_5 contributed by Wastes 001*, 002, 003, 004, 005 and 007 shall be determined by summing the calculated industrial effluent guideline limits for C&H with the calculated municipal limits for the District as follows:

Limit = C&H + District

Limit (monthly average lbs/day) = 3700 + 30 mg/l x District flow (mgd) x 8.34

Limit (monthly average kg/day) = 1700 + 30 mg/l x District flow (mgd) x 3.79

Limit (daily max. lbs/day) = 10,000 + 60 mg/l x District flow (mgd) x 8.34

Limit (daily max. kg/day) = 4600 + 60 mg/l x District flow (mgd) x 3.79

*BOD value for Waste 001 shall be increase above intake water BOD value.

b. Total mass emission rate of Total Suspended Solids contributed by Wastes 002, 003, 004, 005, and 007 shall be determined by summing the calculated industrial effluent guideline limits for C&H with the calculated municipal limits for the District as follows:

Limit = C&H + District

Limit (monthly average lbs/day) = 770 + 30 mg/l x District flow (mgd) x 8.34

Limit (monthly average kg/day) = 350 + 30 mg/l x District flow (mgd) x 3.79

Limit (daily max. lbs/day) = 2300 + 60 mg/l x District flow (mgd) x 8.34

Limit (daily max. kg/day) = 1,000 + 60 mg/l x District flow (mgd) x 3.79

2. The discharge of an effluent containing oil and grease in excess of the following limits is prohibited:

	Waste	Units	Monthly Average	Maximum Daily
a.	Waste 002	mg/l	10	20
b.	Waste 003	mg/l	10	20
c.	Waste 004	mg/l	10	20
d.	Waste 005	mg/l	10	20
e.	Waste 007	mg/l	10	20
f.	Waste 008	mg/l	10	20
g.	Waste 009	mg/l	10	20

3. The wastes 001 and 002 shall not have a pH of less than 6.0 nor greater than 9.0.

4. The wastes 003, 004, 005, 007, 008, and 009 shall not have pH of less than 6.5 nor greater than 8.5.

5. In a flow-through bioassay, waste 002 shall meet the following limit of toxicity: the survival of test fishes of two compliance species, stickleback and either rainbow trout or fathead minnow, in 96 hour bioassays of the effluent as discharged shall be a value of not less than 50% survival.

6. In any representative set of samples, waste 003 as discharged shall meet the following limit of toxicity: the survival of test fishes in 96-hour bioassays of the effluent as discharged shall achieve a median of 90% survival for three consecutive samples.

7. The discharge of waste 002 shall not contain a chlorine residual of greater than 0.0 mg/l.

8. Representative samples of Waste 002 shall not exceed the following limits:

Constituent	Units	Daily Maximum
Arsenic	ug/l	200
Cadmium	ug/l	30
Chromium (VI) (1)	ug/l	110
Copper	ug/l	200
Cyanide	ug/l	25
Lead	ug/l	56
Mercury	ug/l	1
Nickel	ug/l	71
Silver	ug/l	23
Zinc	ug/l	580
Phenols	ug/l	500
PAHs	ug/l	150

(1) The discharger may at their option meet this limit as total chromium.

9. Representative samples of Waste 002 shall not exceed the following limits:

Constituent	Units	Monthly Average	Daily Maximum
Total Identifiable Chlorinated Hydrocarbons (1)	ug/l	2	4

(1) Total Identifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.

10. The total coliform bacteria of Waste 002 for a median of five consecutive effluent samples shall not exceed 240 MPN per 100 milliliters. Any single sample shall not exceed 10,000 MPN per 100 ml when verified by a repeat sample taken within 48 hours.

B. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

a.	Dissolved oxygen	7.0 mg/l minimum. When natural factors cause lesser concentration(s) than that specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
b.	Dissolved Sulfide	0.1 mg/l maximum.
c.	pH	Variation from natural ambient pH by more than 0.5 pH units.
d.	Un-ionized Ammonia as N	0.025 mg/l Annual Median 0.16 mg/l Maximum

3. Elevated temperature waste discharges either individually or combined with other discharges shall not create a zone, defined by water temperatures of more than 1 F above natural receiving water temperature, which exceeds 25 percent of the cross-sectional area of Carquinez Strait at any point.

4. No discharge shall cause a surface water temperature rise greater than 4 F above the natural temperature of the receiving waters at any time or place.

5. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

C. Sludge Requirements

1. Permanent sludge storage or disposal activities are not authorized by this permit. A report of Waste Discharge shall be filed and the site brought into compliance with all applicable regulations prior to commencing any such activity. The discharge of sludge, to any location, shall be in accordance with Title 23, Chapter 3, Subchapter 15 of the California Code of Regulations.

2. The treatment, disposal, storage, or processing of sludge shall not create a pollution or nuisance as defined in Section 13050(l) and (m) of the California Water Code.

3. The treatment, disposal, storage, or processing of sewage sludge shall not cause waste material to be in any position where it is, or can be, carried from the sludge treatment, disposal, storage, or processing site and be deposited in waters of the State.

4. Any sludge treatment, disposal, storage, or processing site shall have facilities adequate to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the disposal site to escape from the site. Adequate protection is defined as protected from at least a 100 year storm and from the highest tidal stage that may occur.

5. The direct or indirect discharge of sludge waste to waters of the State is prohibited.

D. Provisions

1. Neither the treatment nor the discharge of pollutants shall create a nuisance as defined in the California Water Code.

2. This Order supercedes Order No. 84-8 which is hereby rescinded.

3. The discharger shall submit plans and time schedules within six months of the date of adoption of this Order for installation of facilities to divert the flows of Wastes 004 through 009 to the wastewater treatment plant. This work shall be completed within twenty four months of the date of adoption of this Order. Thereafter, if any washing, cleaning, steam cleaning or other activity contributing wastewater to these outfall systems occurs, the outfalls shall be diverted to the wastewater treatment plant. During the first rainstorm of the winter and during the entire dry season, the outfalls shall be diverted to the wastewater treatment plant.

4. The discharger shall review and update annually its spill cleanup and containment contingency plan as required by Regional Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

5. The discharger shall develop and submit a Best Management Practices (BMP) program to the Board by January 1, 1990. The BMP program shall be consistent with the EPA regulations 40 CFR 125, Subpart K and the general guidance contained in the "NPDES Best Management Guidance Document", EPA Report No. 600/9-79-045, December 1979 (revised June 1981). A BMP program acceptable to the Executive Officer shall be implemented by July 1, 1990.

6. This Order includes the attached "Standard Provisions, Reporting Requirements and Definitions" dated December 1986, except for items B.2, and C.8.

7. The discharger shall notify the Regional Board if any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited by this Order.

8. This permit may be modified prior to the expiration date to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge.

9. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act, or amendments thereto, and shall take effect at the end of ten days from the date of hearing provided the Regional Administrator, U.S. Environmental Protection Agency, has no objections.

10. The discharger shall comply with the self-monitoring program as adopted by this Board and as may be amended by the Executive Officer.

11. This Order expires on July 19, 1994, and the discharger must file a Report of Waste Discharge in accordance with Title 23, California Administrative Code, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.

I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on July 19, 1989.

STEVEN R. RITCHIE
Executive Officer

Attachments:
Standard Provisions, Reporting Requirements & Definitions - December, 1986
Self-Monitoring Program
Location Map
Wastewater Flow Diagrams

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

CALIFORNIA AND HAWAIIAN SUGAR COMPANY

AND

CROCKETT-VALONA SANITARY DISTRICT

NPDES NO. CA0005240
ORDER NO. 89-121

CONSISTS OF

PART A, dated 12/86

and

PART B, adopted July 19, 1989
revised March 1, 1993

Part B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT AND INTAKE

Station	Description
I-1	At any point in the salt water intake system prior to any usage or treatment of intake water.
I-2	At any point in the wastewater conveyance system from Crockett-Valona Sanitary District to the C&H - District Treatment Plant where flow measurements are representative of the flow rates of wastewater delivered by Crockett-Valona Sanitary District.
I-3	At any point in the wastewater conveyance system where the flow measurements are representative of the flow rates of Waste 001 diverted for discharge as part of Waste 003.

B. EFFLUENT

Station	Description
E-001	At any point in the Waste 001 outfall between the point of discharge and the point at which all waste tributary to that outfall is present.
E-002	At any point in the Waste 002 outfall between the point of discharge and the point at which all fully treated waste tributary to that outfall is present.
E-002-D	At a point in the disinfection facilities at which adequate contact with the disinfectant has been achieved.
E-003	At any point in the Waste 003 outfall between the point of discharge and the point at which all waste tributary to that outfall is present.
E-004	A point located at the discharge side of the pump which is periodically used to dewater the rail car weigh pit. Samples

should not be collected from the weigh pit itself.

E-005	At any point in the Waste 005 outfall between the point of discharge and the point at which all waste tributary to that outfall is present.
E-007	At any point in the Waste 007 outfall between the point of discharge and the point at which all waste tributary to that outfall is present.
E-008	At any point in the Waste 008 outfall between the point of discharge and the point at which all waste tributary to that outfall is present.
E-009	At any point in the Waste 009 outfall between the point of discharge and the point at which all waste tributary to that outfall is present.

C. RECEIVING WATERS

Station	Description
C-10	At a point in Carquinez Strait, located in the boil caused by Waste 001.
C-20	At a point in Carquinez Strait located at the edge of the wharf at the intersection of a line extended northerly from the outfall for Waste 003.
C-RE	At a point in Carquinez Strait, located at the edge of the wharf at its easterly end.
C-RW	At a point in Carquinez Strait, located at the edge of the wharf at its westerly end.

II. SCHEDULE OF SAMPLING AND ANALYSIS

A. The schedule of sampling and analysis shall be that given in Table I.

B. Because the plant operates on a 10 days on and 4 days down 14 day cycle, samples should be collected in a well-ordered pattern, as defined below. Day 1 will be the first day of the 10 days on, with day 14 being the last day of the 4 days shutdown.

Sampling frequency	Day(s) of cycle to be sampled
D	1,2,3,4,5,6,7,8,9,10,11,12,13,14
5/W	1,2,3,4,5,6,7,8,9,10
2/W	2,4,7,9
W	2,7
2W	2
2/M	2
M	2
3M	2

I, Steven R. Ritchie, Executive, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 89-121.

2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be ordered by the Executive Officer.

STEVEN R. RITCHIE
Executive Officer

Effective Date: July 21, 1989

Attachments:
Table I

C&H Sugar Co.
NPDES No. CA0005240

TABLE 1
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

revised March 1, 1993

Sampling Station	I-1	I-2	I-3	E-001		E-002		E-002 D	E-003		E-004 *	E-005
TYPE OF SAMPLE	C-24	Cont		C-24	G	C-24	G	G	C-24	G	G	G
Flow Rate (mgd)	D	D	D (2)		cont		cont		W			Q(2)
BOD, 5-day, 20°C, (mg/l & kg/day)	2/W			2/W		W			W			Q(4)
Chlorine Residual & Dosage (mg/l & kg/day) (5)							cont or 2H					
Settleable Matter (ml/l-hr. & cu. ft./day)							W					
Total Suspened Matter (mg/l & kg/day)						W			W			Q(4)
Oil and Grease (mg/l & kg/day)						W (1)			W (1)			
Coliform (Total or Fecal) (MPN/100 ml) per req't								3 D/W				
Fish Tox'y 96-hr. TL_{50} %Surv'l in undiluted waste						2W				M		
Ammonia Nitrogen (mg/l & kg/day)												
Nitrate Nitrogen (mg/l & kg/day)												
Nitrite Nitrogen (mg/l & kg/day)												
Total Organic Nitrogen (mg/l & kg/day)												
Total Phosphate (mg/l & kg/day)												
Turbidity (Jackson Turbidity Units)												
pH (units)					5/W		cont			cont		Q(4)
Dissolved Oxygen (mg/l and % Saturation)												
Temperature (°C)					5/W					W		
Apparent Color (color units)												
Secchi Disc (inches)												
Sulfides (if DO<5.0 mg/l) Total & Dissolved (mg/l)						M						
Arsenic (mg/l & kg/day)						Q						
Cadmium (mg/l & kg/day)						Q						
Chromium, Total (mg/l & kg/day)						Q						
Copper (mg/l & kg/day)						M						
Cyanide (mg/l & kg/day)						Q						
Silver (mg/l & kg/day)						Q						
Lead (mg/l & kg/day)						Q						

TABLE 1 (continued)

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	I-1	I-2	I-3	E-001		E-002		E-002 D		E-003	* E-004	E-005	
TYPE OF SAMPLE						C-24	G			G	G	G	
Mercury (mg/l & kg/day)						Q							
Nickel (mg/l & kg/day)						Q							
Zinc (mg/l & kg/day)						Q							
Phenolic Compounds (mg/l & kg/day)						Q							
All Applicable Standard Observsations							5D/W			M		(3,4) Q	
Bottom Sediment Analyses and Observations													
Total Ident. Chlor. Hydrocarbons (mg/l & kg/day)						2/Y							
Polynuclear Aromatic Hydrocarbons						2/Y							
Specific Conductance (µmhos/cm)												Q(4)	
Total Organic Carbon (mg/l & kg/day)												Q(4)	

* The discharger has discontinued discharges to stations E-004 and E-007.

C&H Sugar Co.
NPDES No. CA0005240

Revised March 1, 1993

TABLE 1
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	E-007 *		E-008		E-009		C 10	C-30	C-RW	C-RE			
TYPE OF SAMPLE	C-24	G	C-24	G	C-24	G	G	G	G	G			
Flow Rate (mgd)			Q (2)		Q (2)								
BOD, 5-day, 20°C, (mg/l & kg/day)				Q (4)		Q (4)							
Chlorine Residual & Dosage (mg/l & kg/day) (5)													
Settleable Matter (ml/l-hr. & cu. ft./day)													
Total Suspened Matter (mg/l & kg/day)				Q (4)		Q (4)							
Oil and Grease (mg/l & kg/day)													
Coliform (Total or Fecal) (MPN/100 ml) per req't													
Fish Tox'y 96-hr. TL_{50} %Surv'l in undiluted waste													
Ammonia Nitrogen (mg/l & kg/day)													
Nitrate Nitrogen (mg/l & kg/day)													
Nitrite Nitrogen (mg/l & kg/day)													
Total Organic Nitrogen (mg/l & kg/day)													
Total Phosphate (mg/l & kg/day)													
Turbidity (Jackson Turbidity Units)													
pH (units)				Q (4)		Q (4)				Q			
Dissolved Oxygen (mg/l and % Saturation)										Q			
Temperature (°C)										Q			
Apparent Color (color units)													
Secchi Disc (inches)													
Sulfides (if DO<5.0 mg/l) Total & Dissolved (mg/l)													
Arsenic (mg/l & kg/day)													
Cadmium (mg/l & kg/day)													
Chromium, Total (mg/l & kg/day)													
Copper (mg/l & kg/day)													
Cyanide (mg/l & kg/day)													
Silver (mg/l & kg/day)													
Lead (mg/l & kg/day)													

C&H Sugar Co.
NPDES No. CA0005240

revised March 1, 1993

TABLE 1 (continued)

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	E-007*		E-008		E-009		C-10	C-30	C-RE	C-RE			
TYPE OF SAMPLE		G		G		G	G	G	G	G			
Mercury (mg/l & kg/day)													
Nickel (mg/l & kg/day)													
Zinc (mg/l & kg/day)													
Phenolic Compounds (mg/l & kg/day)													
All Applicable Standard Observsations				(3,4)		(3,4) Q	Q	Q	Q	Q			
Bottom Sediment Analyses and Observations													
Total Ident. Chlor. Hydrocarbons (mg/l & kg/day)													
Un-ionized NH_4OH										Q			
Specific Conductance (µmhos/cm)				Q(4)		Q(4)				Q			
Total Organic Carbon (mg/l & kg/day)				Q(4)		Q(4)							

* The discharger has discontinued discharges to stations E-004 and E-007.

LEGEND FOR TABLE revised March 1, 1993

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour
0 = observation
Cont = continuous

FREQUENCY OF SAMPLING

E = each occurrence
D = once each day
W = once each week
M = once each month
5 D/W = 5 days per week
3 D/W = 3 days per week
2 D/W = 2 days per week
Q = every 3 months
Y = once a year

TYPES OF STATIONS

I = intake and/or water supply stations and Waste 001 diversion station
E = waste effluent stations
C = receiving water stations
L = basin and/or pond levee stations

FOOTNOTES

1. Separately collect and analyze at 8 hour intervals three grab samples for oil and grease on each sampling day. Report the arithmetic average of these as the value for that day, and use it to calculate the kg/day discharge rate. Alternately, the samples may be combined for analysis if their volume is proportional to flow rate at time collected within ± 5% and if the samples and their containers are handled in accordance with the procedures of Standard Methods for oil and grease samples. This means that glass container used for sample collection or mixing shall be thouroghly rinsed with solvent as soon as possible after use, and the solvent rinsing shall be added to the composite wastewater sample for extraction and analysis.

2. Daily, Monthly or Quarterly Estimate.

3. Receiving water standard observations are excused if effluent not turbid, discolored, oily, and no floating matter.

4. During wet weather period, take sample during first daylight storm of each calendar quarter. The analyses for BOD may be discontinued after May 1994 if insignificant levels are measured during previous years.

5. Dosage shall be reported in lbs/day on a daily basis. Chlorine residual after adeguate contact and prior to de-chlorination shall be monitored continuously or every 2 hours and reported as a daily grab. Final chlorine residual shall be reported using the atttached form "A" or equivalent.

Chlorine Residual - Form A

	Grab Sample mg/l		Corresponding Analyzer Reading, mg/l		Number of Analyzer Readings	Number of Hours Not in Compliance	Maximum Analyzer Reading mg/l	Average Value of Violations mg/l
	AM	PM	AM	PM				
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
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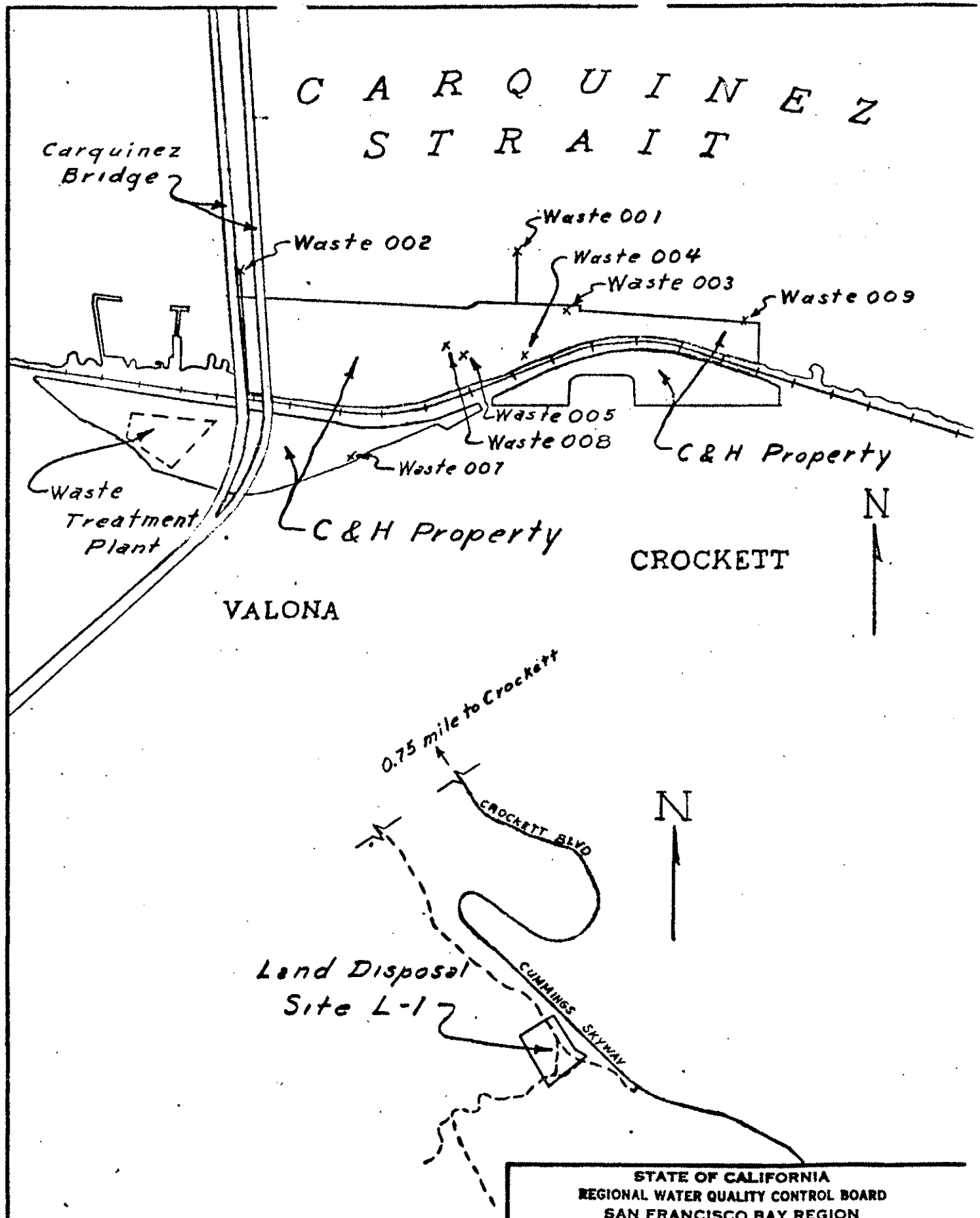
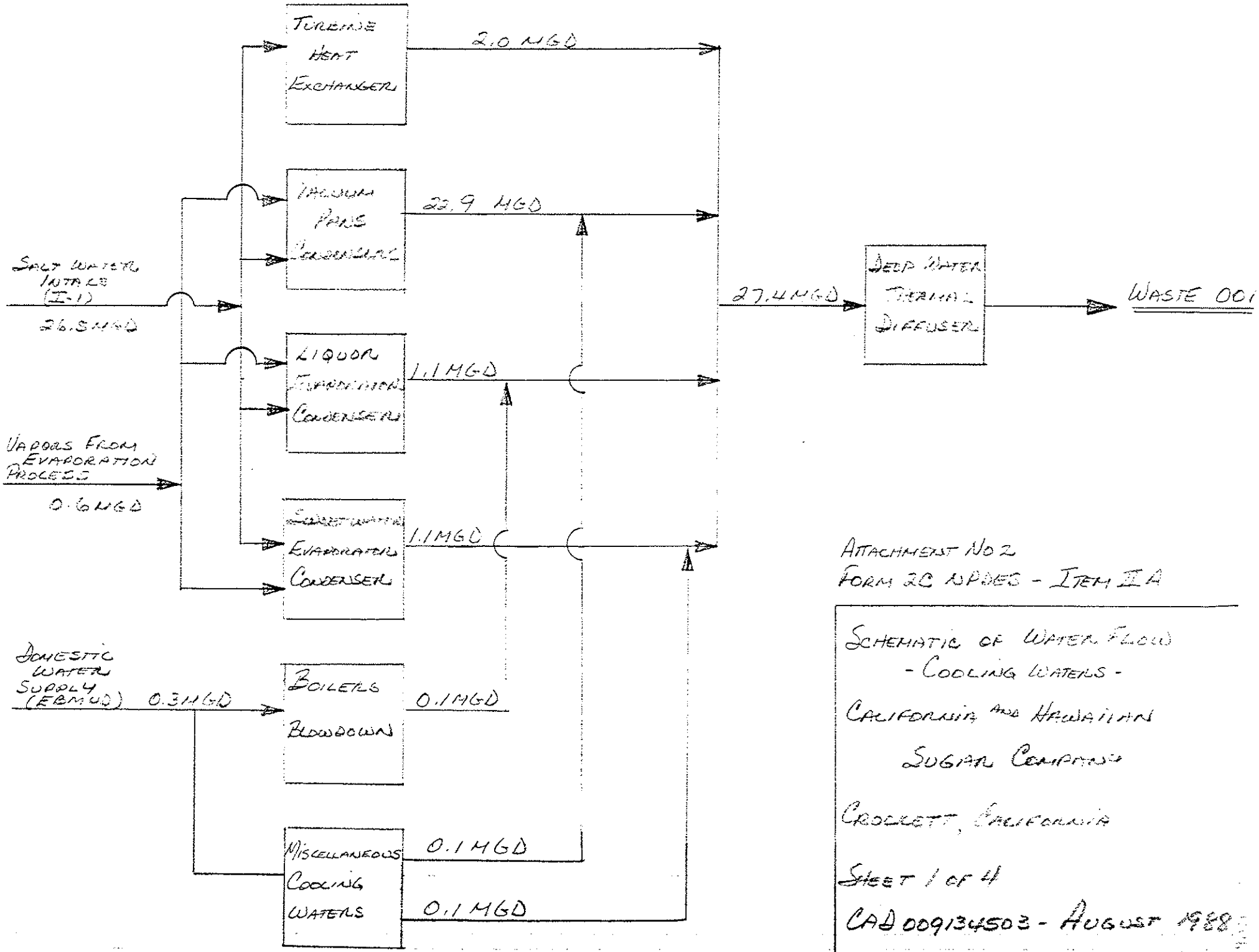


STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

Attachment A
C & H Sugar Co. & Crockett-Valona Sanitary District

DRAWN BY: DAN	DATE: 8-24-83	DRWG. NO. 1



ATTACHMENT NO 2
FORM 2C NPDES - ITEM II A

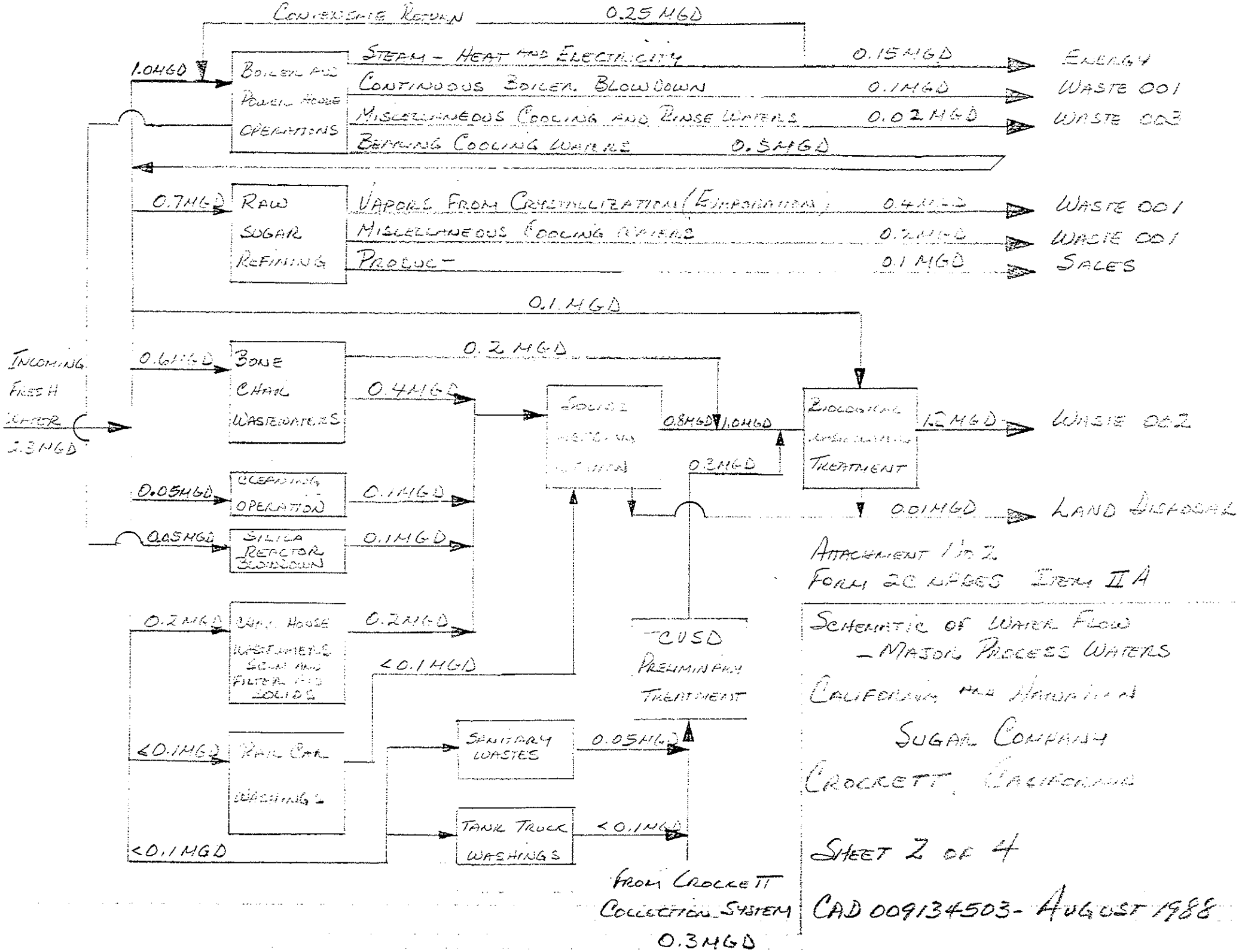
SCHEMATIC OF WATER FLOW
- COOLING WATERS -

CALIFORNIA AND HAWAIIAN
SUGAR COMPANY

CROCKETT, CALIFORNIA

SHEET 1 OF 4

CAD 009134503 - AUGUST 1988



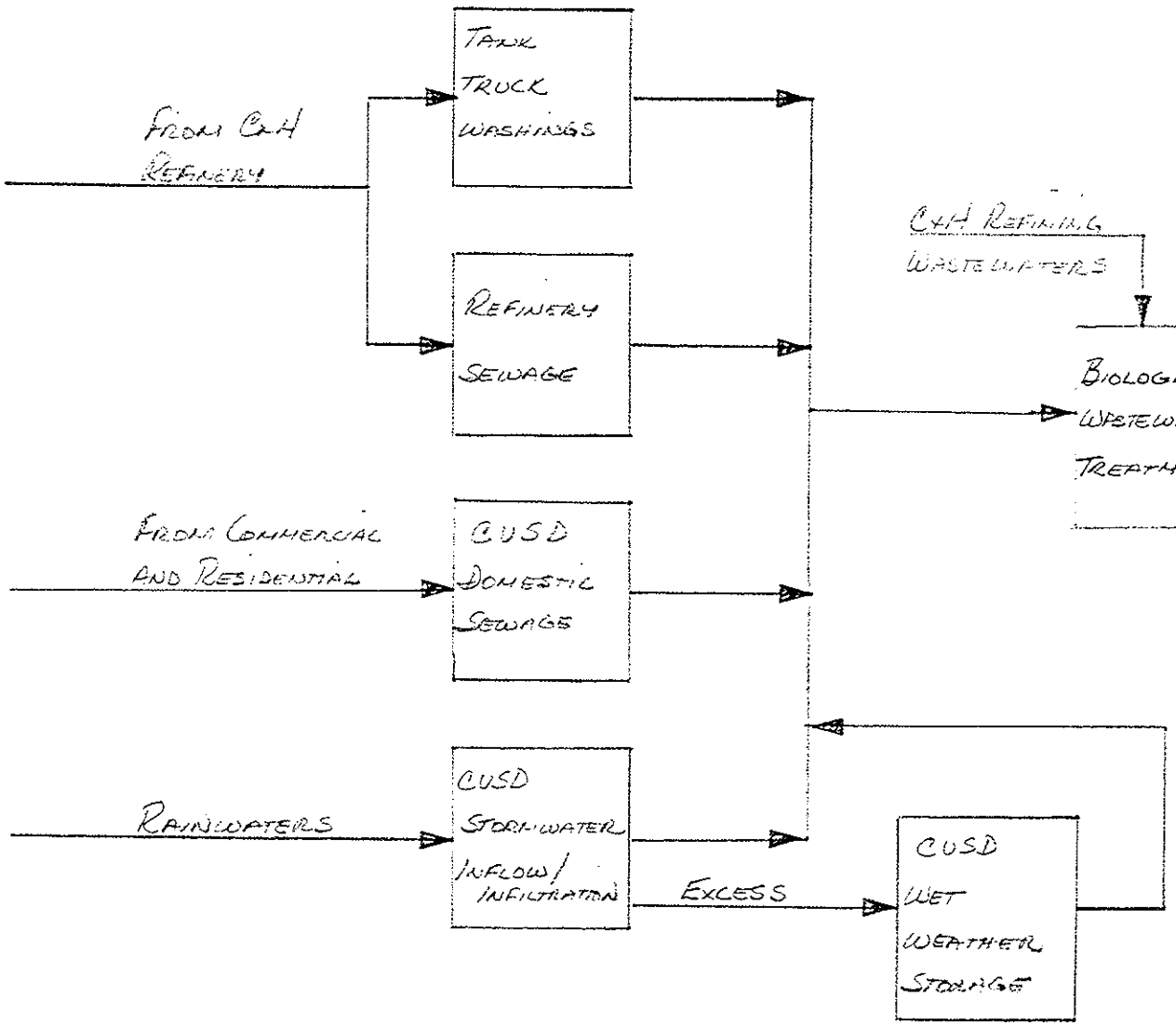
ATTACHMENT No. 2
FORM 2C PAGES ITEM II A

SCHEMATIC OF WATER FLOW
- MAJOR PROCESS WATERS

CALIFORNIA AND HAWAIIAN
SUGAR COMPANY
CROCKETT, CALIFORNIA

SHEET 2 OF 4

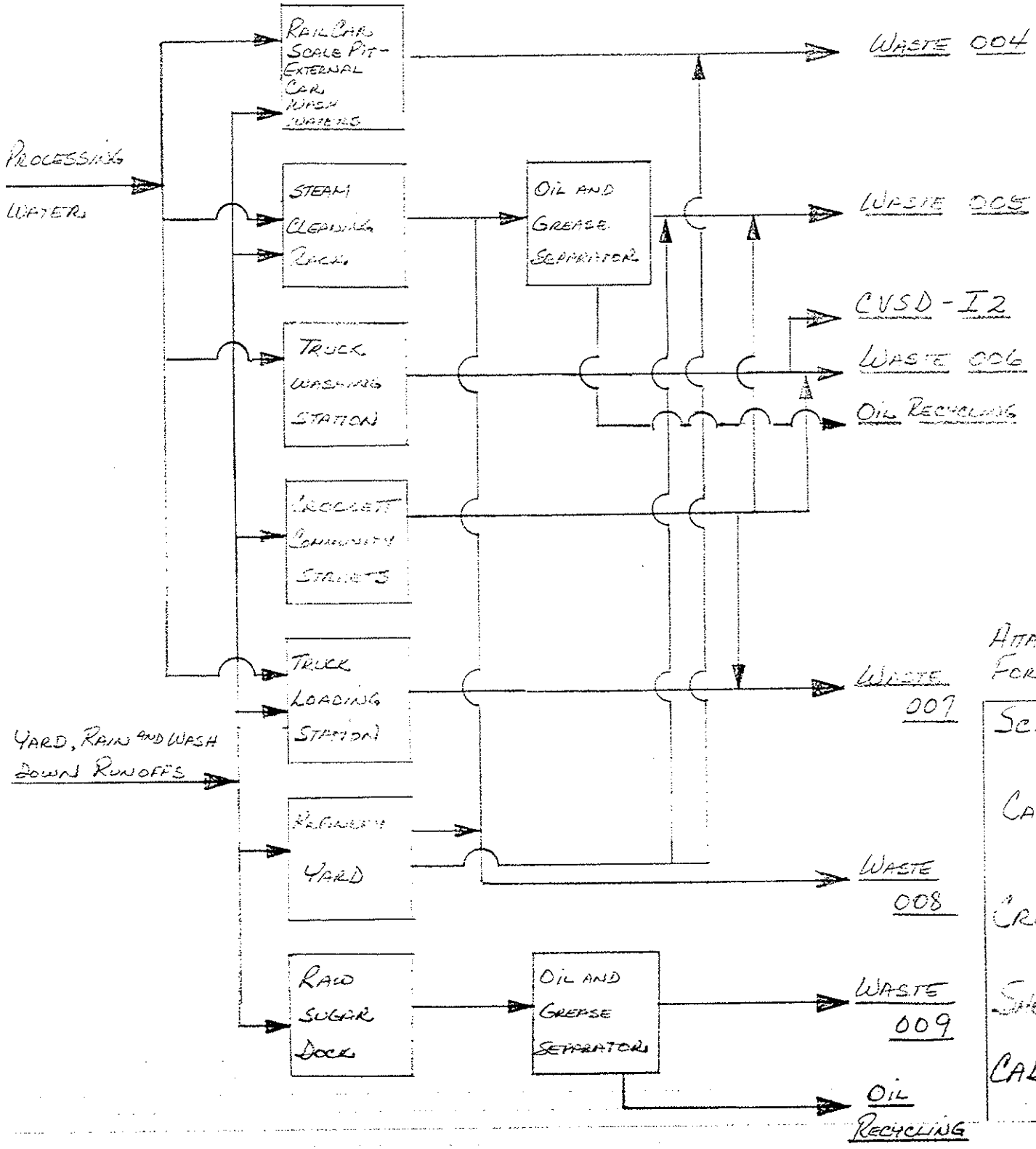
CAD 009134503 - AUGUST 1988



ATTACHMENT No 2
FORM 2C NPDES ITEM I A

SCHEMATIC OF WATER FLOW
- SEWAGE SYSTEM (I2) -
CALIFORNIA AND HAWAIIAN
SUGAR COMPANY
CROCKETT, CALIFORNIA

SHEET 3 OF 4
CAD 009134503 AUGUST 1988



Attachment No 2
Form 2C Pages - Item II A

Schematic of Water Flow
-Minor Discharges-
California and Hawaiian
Sugar Company
Crockett, California

Sheet 4 of 4

CAD 009134503- August 1988